State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #401

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Re: Finishing Of All Unfinished Wood Items

All weatherization materials that are composed of unfinished wood, must be finished using paint, stain, or other waterproofing material and be detectable upon inspection. This will prevent moisture damage and warping and thus help preserve the usefulness of such weatherization items.

If you have any questions, please contact you State Monitor.

CSS/bam/2597R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #402

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Re: Uniform Construction Code Requirements Regarding Insulation and Knob and Tube Wiring

It is the existing policy of the Office of Low-Income Energy Conservation that all work performed by local program operators, or their sub-contractors, for the Low-Income Weatherization Assistance Program conform to applicable building codes.

The New Jersey Uniform Construction Code adopts the National Electric Code as New Jersey's code for electrical matters. Article 324, Section 324.4 of the National Electric Code pertains to knob and tube wiring and completely precludes the use of any insulation product in contact with knob and tube wiring.

Therefore no insulating can take place without a positive determination that either knob and tube wiring is <u>not</u> present, or that any knob and tube wiring observed is not an active part of the dwelling unit's electrical system.

Knob and tube wiring can be recognized by the ceramic knob which lift the wiring above wooden framing members and the ceramic tubes which form "tunnels" for the wiring where it passes through framing members. Knob and tube wiring is also characterized by the presence of separate parallel runs for the positive and negative components of the wiring system.

CSS/bam/2598R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS
101 SOUTH BROAD STREET
PO BOX 800
TRENTON NJ 08625-0800

JOHN O. BENNETT
Acting Governor

Anthony Cancro
Acting Commissioner

Weatherization Bulletin #403

To: Executive Directors, Weatherization Program Managers

From: Clarice S. Sabree-Sylla, Supervisor
Office of Low-Income Energy Conservation

Date: January 8, 2002

Re: **10 CFR 440.** Appendix A – Standards for Weatherization Material
Supercedes WX Bulletin #403, issued April 12, 1999

Affected Programs: HIP, DHS, DOE, HEA

Appendix A has been revised and will be used as the new material standard for the Weatherization Assistance Program effective immediately. Appendix A also supersedes the material standards in the material and installations standards manual. This office suggest that Appendix A be copied to material installation manual for references and compliance purposes.

WPN 01-11

Effective Date - April 11, 2001

SUBJECT: REVISED APPENDIX A

PURPOSE: To provide guidance to Regional Offices and States relative to standards for weatherization materials used in the Weatherization Assistance Program.

SCOPE: The provisions of this guidance apply to all grantees applying for financial assistance under the Department of Energy (DOE) Weatherization Assistance Program (WAP).

BACKGROUND: The current Appendix A was last updated in 1995. Industry-developed standards for the materials used in the Program have been revised since that time. DOE has also approved several new measures since the last update for use in the Program.

PROCEDURES: DOE has updated the standards for weatherization materials, Appendix A to 10 CFR Part 440. Included in the attachment are standards for recently approved weatherization measures approved since the last update in 1995. The attachment to this notice provides revised standards for all currently approved measures used in the Program as of April 1, 2001. States should immediately provide a copy of the new standards to all subgrantees.

Gail McKinley, Director
Office of Building Technology Assistance
Energy Efficiency and Renewable Energy

Appendix A—Standards for Weatherization Materials

The following Government standards are produced by the Consumer Product Safety Commission and are published in title 16, Code of Federal Regulations:

Thermal Insulating Materials for Building Elements Including Walls, Floors, Ceilings, Attics, and Roofs Insulation—organic fiber—conformance to Interim Safety Standard in 16 CFR part 1209;

Fire Safety Requirements for Thermal Insulating Materials According to Insulation Use—Attic Floor—insulation materials intended for exposed use in attic floors shall be capable of meeting the same flammability requirements given for cellulose insulation in 16 CFR part 1209;

Enclosed spaces—insulation materials intended for use within enclosed stud or joist spaces shall be capable of meeting smoldering combustion requirements in 16 CFR part 1209.

The following standards which are not otherwise set forth in part 440 are incorporated by reference and made part of part 440. The following standards have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on March 30, 2001 and a notice of any change in these materials will be published in the Federal Register. The standards incorporated by reference are available for inspection at the Office of the Federal Register Information Center, 800 North Capitol Street, Suite 700, Washington, DC 20001.

The standards incorporated by reference in part 440 can be obtained from the following sources:

Air Conditioning and Refrigeration Institute, 4301 N. Fairfax Drive, Suite 425, Arlington, VA 22203; (703) 524-8800.

American Architectural Manufacturers Association, 1827 Walden Office Square, Suite 104, Schaumburg, Illinois 60173-4268; (847) 303-5664.

American Gas Association, 400 N. Capitol Street, NW, Washington, DC 20001; (202) 824-7000.

American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036; (212) 642-4900.

American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990; (212) 591-7722.

American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; (610) 832-9585.

Federal Specifications, General Services Administration, General Services Administration, Federal Supply Service, Office of the CIO and Marketing Division, Room 800, 1941 Jefferson Davis Hwy., Arlington, VA 22202; (703) 305-6288.

Gas Appliance Manufacturers Association, 2107 Wilson Boulevard, Suite 600, Arlington, Virginia 22201; (703) 525-7060.

National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1847, Rosslyn, VA 22209; (703) 841-3200.

National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101; (617) 770-3000.

Sheet Metal and Air Conditioning Contractors Association, 4201 Lafayette Center Drive, Chantilly, Virginia 20151-1209; (703) 803-2980.

Solar Rating and Certification Corporation, c/o FSEC, 1679 Clearlake Road, Cocoa, FL 32922-5703; (321) 638-1537.

Steel Door Institute, 30200 Detroit Road, Cleveland, OH 44145-1967; (440) 899-0010.

Steel Window Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851; (216) 241-7333.

Tubular Exchanger Manufacturers Association, 25 North Broadway, Tarrytown, NY 10591; (914) 322-0040.

Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096; (847) 272-8800.

Window & Door Manufacturers Association, 1400 East Touhy Avenue, Suite 470, Des Plains, IL 60018; (800) 223-2301.

More information regarding the standards in this reference can be obtained from the following sources:

Environmental Protection Agency, 401 M Street, NW, Washington, DC 20006; (202) 554-1080.

National Institute of Standards and Technology, U.S. Department of Commerce, Gaithersburg, MD 20899; (301) 975-2000.

Weatherization Assistance Program, Office of Building Technology Assistance, Energy Efficiency and Renewable Energy, 1000 Independence Avenue, SW, EE-42, Washington, DC 20585-0121; (202) 586-4074.

Thermal Insulating Materials for Building Elements including Walls, Floors, Ceilings, Attics, and Roofs **[Standards for conformance]**	
Insulation--mineral fiber: **Blanket insulation**	**ASTM[1] C665-98.**

Roof insulation board	ASTM C726-00a.
Loose-fill insulation	ASTM C764-99.
Insulation--mineral cellular:	
Vermiculite loose-fill insulation	ASTM C516-80 (1996)e1.
Perlite loose-fill insulation	ASTM C549-81 (1995)e1.
Cellular glass insulation block	ASTM C552-00.
Perlite insulation board	ASTM C728-97.
Insulation–organic fiber:	
Cellulosic fiber insulating board	ASTM C208-95.
Cellulose loose-fill insulation	ASTM C739-00.
Insulation–organic cellular:	
Preformed block-type polystyrene insulation	ASTM C578-95.
Rigid preformed poly-urethane insulation board	ASTM C591-00.
Polyurethane or polyiso-cyanurate insulation board face with aluminum foil on both sides	FS[2] HH-I-1972/1 (1981).
Polyurethane or polyiso-cyanurate insulation board face with felt on both sides	FS HH-I-1972/2 (1981) and Amendment #1, October 3, 1985).
Insulation–composite boards:	ASTM C726-00a.
Mineral fiber and rigid cellular polyurethane composite roof insulation board	FS HH-I-1972/4 (1981).
Gypsum board and poly-urethane or poliso-cyanurate composite board	Commercially available.
Materials used as a patch to	

reduce infiltration through the building envelope	

[1] ASTM indicates American Society for Testing and Materials.

[2] FS indicates Federal Specifications.

Thermal Insulating Materials for Pipes, Ducts, and Equipment Such as Boilers and Furnaces [Standards for conformance]	
Insulation–mineral fiber:	
Preformed pipe insulation	ASTM[1] C547-00.
Blanket and felt insulation (industrial type)	ASTM C553-00.
Blanket insulation and blanket type pipe insulation (metal-mesh covered, industrial type)	ASTM C592-00.
Block and board insulation	ASTM C612-00.
High-temperature fiber blanket insulation	ASTM C892-00.
Insulation–mineral cellular:	
Calcium silicate block and pipe insulation	ASTM C533-95.
Cellular glass insulation	ASTM C552-00.
Expanded perlite block and pipe insulation	ASTM C610-99.
Insulation–organic cellular:	
Preformed flexible elastomeric	ASTM C534-99

cellular insulation in sheet and tubular form	
Unfaced preformed rigid cellular polyurethane insulation	ASTM C591-00.
Insulation skirting	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.

Fire Safety Requirements for Insulating Materials According to Insulation Use [Standards for conformance]	
Attic floor	Insulation materials intended for exposed use in attic floors shall be capable of meeting the same smoldering combustion requirements given for cellulose insulation in ASTM[1] C739-00.
Enclosed space	Insulation materials intended for use within enclosed stud or joist spaces shall be capable of meeting the same smoldering combustion requirements given for cellulose insulation in ASTM C739-00.
Exposed interior walls and ceilings	Insulation materials, including those with combustible facings, which remain exposed and serve as wall or ceiling interior finish, shall have a flame spread

	classification not to exceed 150 (per ASTM E84-00a).
Exterior envelope walls and roofs	Exterior envelope walls and roofs containing thermal insulation shall meet applicable local government building code requirements for the complete wall or roof assembly.
Pipes, ducts, and equipment	Insulation materials intended for use on pipes, ducts, and equipment shall be capable of meeting a flame spread classification not to exceed 150 (per ASTM E84-00a).

[1] ASTM indicates American Society for Testing and Materials.

Storm Windows [Standards for conformance]	
Storm windows:	
Aluminum insulating storm windows	ANSI/AAMA[1] 1002.10-93.
Aluminum frame storm windows	ANSI/AAMA 1002.10-93.
Wood frame storm windows	ANSI/NWWDA[2] 101/I.S. 2-97 (Section 3)
Frameless plastic glazing storm	Required minimum thickness for windows is 6 mil (0.006 inches).
Movable insulation systems for windows	Commercially available.

[1] ANSI/AAMA indicates American National Standards Institute/American Architectural Manufacturers Association.

[2] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association (now the Window & Door Manufacturers Association).

Replacement Windows [Standards for conformance]	
Replacement windows:	
Aluminum frame windows	ANSI/NWWDA[1] 101/I.S. 2-97.
Steel frame windows	Steel Window Institute recommended specifications for steel windows, 1990.
Wood frame windows	ANSI/NWWDA I.S. 2-97.

[1] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association (now the Window & Door Manufacturers Association).

Storm Doors [Standards for conformance]	
Storm doors–aluminum:	
Storm doors	ANSI/AAMA[1] 1102.7-89.
Sliding glass storm doors	ANSI/AAMA 1002.10-93.
Wood Storm doors	Commercially available.
Rigid vinyl storm doors	ASTM[2] D3678-97.
Vestibules:	
Materials to construct vestibules	Commercially available.

[1] ANSI/AAMA indicates American National Standards Institute/American Architectural Manufacturers Association.

[2] ASTM indicates American Society for Testing and Materials.

Replacement Doors [Standards for conformance]	
Replacement doors– hinged doors:	
Steel doors	ANSI[1] A250.8-98.
Wood doors:	
Flush doors	ANSI/NWWDA[2] I.S. 1-97 (Amendment, exterior door provisions).
Pine, fir, hemlock and spruce doors	ANSI/NWWDA I.S. 6-97.
Sliding patio doors:	
Aluminum doors	ANSI/NWWDA 101/I.S. 2-97.
Wood doors	ANSI/NWWDA I.S. 3-88.

[1] ANSI indicates American National Standards Institute.

[2] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association (now the Window & Door Manufacturers Association).

Caulks and Sealants [Standards for conformance]	
Caulks and sealants:	
Glazing compounds for metal stash	ASTM[1] C669-00.
Oil and resin base caulks	ASTM C570-00.
Acrylic (solvent types) sealants	ASTM C920-98e1.

Butyl rubber sealants	FS[2] Commercial Item Desc. A-A-272 (6/7/95).
Chlorosulfonated polyethylene sealants	ASTM C920-98e1.
Latex sealing compounds	ASTM C834-00e1.
Elastomeric joint sealants (normally considered to in-clude polysulfide, polyurethane, and silicone)	ASTM C920-98e1.
Preformed gaskets and sealing materials	ASTM C509-00.

[1] ASTM indicates American Society for Testing and Materials.

[2] FS indicates Federal Specifications.

Weatherstripping [Standards for conformance]	
Weatherstripping	Commercially available.
Vapor retarders	Selected according to the provisions cited in ASTM[1]C755-97. Permeance not greater than 1 perm when determined according to the desiccant method described in ASTM E96-00.
Items to improve attic ventilation	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.

Heat Exchangers [Standards for conformance]

Heat exchangers, water-to-water and steam-to-water	ASME[1] Boiler and Pressure Vessel Code, 1998, Sec-tions II, V, VIII, IX, and X, as applicable to pressure vessels. Standards of Tubular Exchanger Manu-facturers Associa-tion, Eighth Edition, 1999.
Heat exchangers with gas-fired appliances[2]	ANSI/UL[3] 462, Ninth Edition, approved by ANSI February 28, 1997.
Heat pump water heating heat recovery systems	Electrical components to be listed by UL.

[1] ASME indicates American Society for Mechanical Engineers.

[2] The heat reclaimer is for installation in a section of the vent connector from appliances equipped with draft hoods or appliances equipped with powered burners or induced draft and not equipped with a draft hood.

[3] ANSI/UL indicates American National Standards Institute/Underwriters Laboratories.

Boiler/Furnace Control Systems [Standards for conformance]	
Automatic set back thermostats	Listed by UL[1]. Conformance to NEMA[2] DC3-1989 (R1996).
Line voltage or low voltage room thermostats	Listed by UL. Conformance to NEMA DC3-1989 (R1996).
Clock thermostats	Listed by UL. Conformance to NEMA DC3-1989 (R1996).

Automatic gas ignition systems	ANSI[3] Z21.21-2000. AGA[4] Lab Certification Seal.
Energy management systems	Listed by UL.
Hydronic boiler controls	Listed by UL.
Other burner controls	Listed by UL.

[1] UL indicates Underwriters Laboratories.

[2] NEMA indicates National Electrical Manufacturers Association.

[3] ANSI indicates American National Standards Institute.

[4] AGA indicates American Gas Association.

Water Heater Modifications [Standards for conformance]	
Insulate tank and distribution piping	(See insulation section of this appendix)
Install heat traps on inlet and outlet piping	Applicable local plumbing code.
Install/replace water heater heating elements	Listed by UL[1].
Electric, freeze-prevention tape for pipes	Listed by UL.
Install stack damper, gas-fueled	ANSI[2] Z21.66-1996, including Exhibits A & B, and ANSI Z223.1-1999 (same as NFPA[3] 54-1999).
Install stack damper, oil-fueled	UL 17, Third Edition, 1994, NFPA 31-2001, NFPA 211-2000 (same as ANSI A52.1), and ANSI/ NFPA 70-1999 (same as IEEE[4] National Electrical Code).
Install water flow modifiers	Commercially available.

[1] UL indicates Underwriters Laboratories.

[2] ANSI indicates American National Standards Institute.

[3] NFPA indicates National Fire Prevention Association.

[4] IEEE indicates Institute of Electrical and Electronics Engineers.

Replacement Water Heaters [Standards for conformance]	
Electric water heaters	**NEACA[1] 1987, ASHRAE[2] 90.1b, and UL[3] 174.**
Gas water heaters:	
Rated £75 kBtu/hr	**ANSI[4] Z21.10.1-**
Rated ³75 kBtu/hr	**ANSI Z21.10.3-**

[1] NEACA indicates National Energy Appliance Conservation Act.

[2] ASHRAE indicates American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

[3] UL indicates Underwriters Laboratories.

[4] ANSI indicates American National Standards Institute.

Solar Water Heating Systems [Standards for conformance]	
Solar water heating systems including forced circulation, integral collector storage, thermo-syphon, and self-pumping systems	**System must be certified per SRCC[1] OG 300, July 16, 1998.**

[1] SRCC indicates Solar Rating and Certification Corporation.

Waste Heat Recovery Devices [Standards for conformance]

Desuperheater/water heaters	ARI[1] 470-1995.
Condensing heat exchangers	Commercially available components and in new heating furnace systems to manu-facturers' specifi-cations.
Condensing heat exchangers	Commercially available (Commercial, multi-story building, with teflon-lined tubes institutional) to manufacturers' specifications.
Energy recovery equipment	Energy Systems Analysis and Management, 1997 (SMACNA[2]).

[1] ARI indicates Air Conditioning and Refrigeration Institute.

[2] SMACNA denotes Sheet Metal and Air Conditioning Contractors' National Association.

Boiler Repair and Modifications/Efficiency Improvements [Standards for conformance]	
Install gas conversation burners	ANSI[1] Z21.8-1994 (for gas- or oil-fired systems), ANSI Z21.17-1998, and ANSI Z223.1-1999 (same as NFPA 54-1999). AGA[2] Laboratories Certification Seal.
Replace oil burner	UL[3] 296, Ninth Edition, 1994 and NFPA 31-2001.
Install burners (oil/gas)	ANSI Z223.1-1999 for gas

Install burners (oil/gas)	equipment and NFPA[4] 31-2001 for oil equipment.
Re-adjust boiler water temperature or install automatic boiler temperature reset control	ASME[5] CSD-1-1998, ANSI Z223.1-1999, and NFPA 31-2001.
Replace/modify boilers	ASME Boiler and Pressure Vessel Code, 1998, Section II, IV, V, VI, VIII, IX, and X. Boilers must be Hydronics Institute Division of GAMA equipment.
Clean heat exchanger, adjust burner air shutter(s), check smoke no. on oil-fueled equipment. Check operation of pump(s) and replacement filters.	Per manufacturers' instructions.
Replace combustion chambers	Refractory linings may be required for conversions.

Boiler Repair and Modifications/Efficiency Improvements—Continued [Standards for conformance]	
Replace heat ex-changers, tubes	Protection from flame contact with conversion burners by refractory shield.
nstall/replace thermo-static radiator valves	Commercially available. One-pipe steam systems require air vents on each radiator; see manufacturers' requirements.
Install boiler duty cycle control system	Commercially available. ANSI/NFPA 70-1999 (same as IEEE National Electrical Code) and local electrical code provisions for wiring.

[1] ANSI indicates American National Standards Institute.

[2] AGA indicates American Gas Association.

[3] UL indicates Underwriters Laboratories.

[4] NFPA indicates National Fire Prevention Association.

[5] ASME indicates American Society for Mechanical Engineers.

Heating and Cooling System Repairs and Tune-ups/Efficiency Improvements [Standards for conformance]	
Install duct insulation	**ASTM[1] C612-00 (see insulation sections of this appendix).**
Reduce Input of burner; derate gas-fueled equipment	**Local utility company and procedures if applicable for gas-fueled furnaces and ANSI[2] Z223.1-1999 (same as NFPA[3] 54-1999) including Appendix H.**
Repair/replace oil-fired equipment	**NFPA 31-2001.**
Replace combustion chamber in oil-fired furnaces or boilers	**NFPA 31-2001.**
Clean heat exchanger and adjust burner; adjust air shutter and check CO_2 and stack temperature. Clean or replace air filter on forced air furnace	**ANSI Z223.1-1999 (same as NFPA 54-1999) including Appendix H.**
Install vent dampers for gas-fueled heating systems	**Applicable sections of ANSI Z223.1-1999 (same as NFPA 54-1999) including Appendix H, I, J, and K. ANSI Z21.66-1996 and Exhibits A&B for**

	electrically operated dampers.
Install vent dampers for oil-fueled heating systems	Applicable sections of NFPA 31-2001 for installation and in conformance with UL[4] 17, Third Edition, 1994.

Heating and Cooling System Repairs and Tune-ups/Efficiency Improvements—Continued [Standards for conformance]	
Reduce excess combustion air:	
A: Reduce vent connector size of gas-fueled appliances	ANSI Z223.1-1999 (same as NFPA 54-1999) part 9 and Appendices G & H.
B: Adjust barometric draft regulator for oil fuels	NFPA 31-2001 and per furnace and boiler manufacturers' instructions.
Replace constant burning pilot with electric ignition device on gas-fueled furnaces or boilers	ANSI Z21.71-1993.
Readjust fan switch on forced air gas-or oil-fueled furnaces	Applicable sections and Appendix H of ANSI Z223.1-1999 (same as NFPA 54-1999) for gas furnaces and NFPA 31-2001 for oil furnaces.
Replace burners	See power burners (oil/gas).
Install/replace duct furnaces (gas)	ANSI Z223.1-1999 (same as

	NFPA 54-1999).
Install/replace heat pumps	Listed by UL.
Replace air diffusers, intakes, registers, and grilles	Commercially available.
Install/replace warm air heating metal ducts	Commercially available.
Filter alarm units	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.

[2] ANSI indicates American National Standards Institute.

[3] NFPA indicates National Fire Prevention Association.

[4] UL indicates Underwriters Laboratories.

Replacement Furnaces, Boilers, and Wood Stoves [Standards for conformance]	
Chimneys, fireplaces, vents and solid fuel burning appliances	NFPA[1] 211-2000 (same as ANSI[2] A52.1).
Gas-fired furnaces	ANSI Z21.47-1998 and ANSI Z223.1-1999 (same as NFPA 54-1999).
Oil-fired furnaces	UL[3] 727, Eighth Edition, 1994 and NFPA 31-2001.
Liquefied petroleum gas storage	NFPA 58-2001.
Ventilation fans:	
Including electric attic, ceiling, and whole-house fans	UL 507, Ninth Edition, 1999.

[1] NFPA indicates National Fire Prevention Association.

[2] ANSI indicates American National Standards Institute.

[3] UL indicates Underwriters Laboratories.

Air Conditioners and Cooling Equipment [Standards for conformance]	
Air conditioners:	
Central air conditioners	ARI[1] 210/240-1994.
Room size units	ANSI/AHAM[2] RAC 1-1992.
Other cooling equipment:	
Including evaporative coolers, heat pumps, and other equipment	UL[3] 1995, Second Edition, 1995.

[1] ARI indicates Air Conditioning and Refrigeration Institute.

[2] ANSI/AHAM indicates American National Standards Institute/Association if Home Appliance Manufacturers.

[3] UL indicates Underwriters Laboratories.

Screens, Window Films, and Reflective Materials [Standards for conformance]	
Insect screens	Commercially available.
Window films	Commercially available.
Shade screens:	
Fiberglass shade screens	Commercially available.
Polyester shade screens	Commercially available.
Rigid awnings:	
Wood rigid awnings	Commercially available.
Metal rigid awnings	Commercially available.
Louver systems:	
Wood louver awnings	Commercially available.

Metal louver awnings	**Commercially available.**
Industrial-grade white paint used as a heat-reflective measure on awnings, window louvers, doors, and exterior duct work (exposed)	**Commercially available.**

Refrigerators **[Standards for conformance]**	
Refrigerator/freezers (does not include freezer-only units)	**UL[1] 250. Replaced units must be disposed of properly per Clean Air Act 1990, Section 608, as amended by 40 CFR[2] 82, May 14, 1993.**

[1] UL indicates Underwriters Laboratories.

[2] CFR indicates Code of Federal Regulations.

Fluorescent Lamps and Fixtures **[Standards for conformance]**	
Compact fluorescent lamps	**ANSI/UL[1] 542, Seventh Edition, February 6, 1997 and UL 1993, First Edition, 1993.**
Fluorescent lighting fixtures	**UL 1570, Fourth Edition, 1995.**

[1] ANSI/UL indicates American National Standards institute/Underwriters Laboratories.

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
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JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #403

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Affected Programs: All

Topic: Standards for Weatherization Materials

Reference: (1) DOE, DHS and HIP Contracts

Summary: Transmits a complete set of the Standards for Weatherization Materials which were issued by the Federal Department of Energy in April, 1993.

The Federal Department of Energy's Standards for Weatherization Materials were revised in April, 1993. These revised standards can be found in appendix A of 10CFR440. A complete set of the revised standards is attached to this Bulletin.

Only materials which are listed in the Standards for Weatherization Materials are permitted to be installed with Weatherization Assistance Program funds without prior written approval. All installed materials must, at a minimum, meet the requirements listed in the Standards for Weatherization Materials.

It is advisable that the agency consider stricter standards for those materials where the listed standard is , "commercial availability".

CSS/bam/2599R

APPENDIX A—STANDARDS FOR WEATHERIZATION MATERIALS

The following Government standards are produced by the Consumer Product Safety Commission and are published in Title 16, Code of Federal Regulations.

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Fire Safety Requirements for Thermal Insulating Materials According to Insulation Use–Attic Floor–insulation materials intended for exposed use in attic floors shall be capable of meeting the same flammability requirements given for cellulose insulation in 16 CFR Part 1209.

Enclosed spaces—insulation materials intended for use within enclosed stud or joist spaces shall be capable of meeting the smoldering combustion requirements in 16 CFR Part 1209.

The following standards which are not otherwise set forth in Part 440 are incorporated by reference and made a part of Part 440. The following standards have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. These materials are incorporated as they exist on April 5, 1993 and a notice of any change in these materials will be published in the Federal Register. The standards incorporated by reference are available for inspection at the Office of the Federal Register Information Center, 800 North Capitol Street, Suite 700, Washington, D.C.

The standards incorporated by reference in Part 440 can be obtained from the following sources:

Air Conditioning and Refrigeration Institute, 1501 Wilson Blvd., Arlington, VA 22209; (703)

524-8800.

American Gas Association, 1515 Wilson Blvd., Arlington, VA 22209; (703) 841-8400.

American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018; (212) 642-4900.

American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017; (212) 705- 7800.

American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103; (215) 299-5400.

American Architectural Manufacturers Association, 1540 East Dundee Road, Palatine, IL 60067; (708) 202-1350.

Federal Specifications, General Services Administration, Specifications Section, Room 6654, 7th and D Streets, SW, Washington, DC 20407; (202) 708-5082.

Gas Appliance Manufacturers Association, 1901 Moore St., Arlington, VA 22209; (703) 525-9565.

National Electrical Manufacturers Association, 2101 L Street, NW, Suite 300, Washington, DC 20037; (202) 457-8400.

National Fire Protection Association, Batterymarch Park, P.O. Box 9101, Quincy, MA 02269; (617) 770-3000.

National Standards Association, 1200 Quince Orchard Blvd., Gaithersburg, MD 20878; (301) 590-2300. (NSA is a local contact for materials from ASTM).

National Wood Window and Door Association, 1400 East Touhy Avenue, Des Plaines, IL 60018; (708) 299-5200.

Sheet Metal and Air Conditioning Contractors Association, P.O. Box 221230, Chantilly, VA 22022-1230; (703) 803-2980.

Steel Door Institute, 712 Lakewood Center North, 14600 Detroit Avenue, Cleveland, OH 44107; (216) 899-0100.

Steel Window Institute, 1230 Keith Building, Cleveland, OH 44115; (216) 241-7333.

Tubular Exchanger Manufacturers Association, 25 North Broadway, Tarrytown, NY 10591; (914) 332-0040.

Underwriters Laboratories, Inc., P.O. Box 75530, Chicago, IL 60675-5330; (708) 272-8800.

More information regarding the standards in this reference can be obtained from the following sources:

Environmental Protection Agency, 401 M Street, NW, Washington, DC 20006; (202) 554-1080.

National Institute of Standards and Technology, U.S. Department of Commerce, Gaithersburg, MD 20899 (301) 975-2000.

Weatherization Assistance Programs Division, Conservation and Renewable Energy, Mail Stop 5G-023, Forrestal Bldg, 1000 Independence Ave, SW, Washington, DC 20585; (202) 586-2207.

THERMAL INSULATING MATERIALS FOR BUILDING ELEMENTS INCLUDING WALLS, FLOORS, CEILINGS, ATTICS, AND ROOFS

	Standards
Insulation - Mineral Fiber	
Blanket insulation . . .	ASTM[1] C665-88.
Roof insulation board	ASTM C726-88.
Loose-fill insulation . .	ASTM C764-88.
Insulation - Mineral Cellular	
Vermiculite loose-fill insulation	ASTM C516-80 (1990).
Perlite loose-fill insulation	ASTM C549-81 (1986).
Cellular glass insulation block	ASTM C552-88.
Perlite insulation board	ASTM C728-89a.
Insulation - Organic Fiber	
Cellulosic fiber insulating board	ASTM C208-72 (1982).
Cellulose loose-fill insulation	ASTM C739-88.
Insulation - Organic Cellular	
Preformed block-type polystyrene insulation	ASTM C578-87a.
Rigid preformed polyurethane insulation board	ASTM C591-85.
Polyurethane or polyisocyanurate insultion board faced with aluminum foil on both sides	FS[2] HH-I-1972/1 (1981).
Polyurethane or polyisocyanurate insulation board faced with felt on both sides	FS HH-I-1972/2 (1981 and Amendment 1 October 3, 1985.

THERMAL INSULATING MATERIALS FOR BUILDING ELEMENTS INCLUDING WALLS, FLOORS, CEILINGS, ATTICS, AND ROOFS—Continued

	Standards
Insulation - Composite Boards	
Mineral fiber and rigid cellular polyurethane composite roof insulation board	ASTM C726-88.
Perlite board and rigid cellular polyurethane composite roof insulation	ASTM C984-83.
Gypsum board and polyurethane or polisocyanurate composite board	FS HH-I-1972/4 (1981).
Materials used as a patch to reduce infiltration through the building envelope	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.
[2] FS indicates Federal Specifications.

THERMAL INSULATING MATERIALS FOR PIPES, DUCTS, AND EQUIPMENT SUCH AS BOILERS AND FURNACES

	Standards
Insulation - Mineral Fiber Preformed pipe insulation	ASTM[1] C547-77.
Blanket and felt insulation (industrial type)	ASTM C553-70 (1977).
Blanket insulation and blanket-type pipe insulation (metal-mesh covered) (industrial type)	ASTM C592-80.
Block and board insulation	ASTM C612-83.
Spray applied fibrous insulation for elevated temperature	ASTM C720-89.
High-temperature fiber blanket insulation	ASTM C892-89.
Duct work insulation . . .	Selected and applied according to ASTM C971-82.

THERMAL INSULATING MATERIALS FOR PIPES, DUCTS, AND EQUIPMENT SUCH AS BOILERS AND FURNACES—Continued

	Standards
Insulation - Mineral Cellular Diatomaceous earth block and pipe insulation	ASTM C517-71 (1979).
Calcium silicate block and pipe insulation	ASTM C533-85 (1990).
Cellular glass insulation .	ASTM C552-88.
Expanded perlite block and pipe insulation	ASTM C610-85.
Insulation - Organic Cellular Preformed flexible elastomeric cellular insulation in sheet and tubular form	ASTM C534-88.
Unfaced preformed rigid cellular polyurethane insulation	ASTM C591-85.
Insulation Skirting	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.

FIRE SAFETY REQUIREMENTS FOR INSULATING MATERIALS ACCORDING TO INSULATION USE

	Standards
Attic floor	Insulation materials intended for exposed use in attic floors shall be capable of meeting the same smoldering combustion requirements given for cellulose insulation in ASTM[1] C739-88.
Enclosed space	Insulation materials intended for use within enclosed stud or joist spaces shall be capable of meeting the smoldering combustion requirements in ASTM C739-88.
Exposed Interior Walls and Ceilings	Insulation materials, including those with combustible facings, which remain exposed and serve as wall or ceiling interior finish, shall have a flame spread classification not to exceed 150 (per ASTM E84-89a).

FIRE SAFETY REQUIREMENTS FOR INSULATING MATERIALS ACCORDING TO INSULATION USE—Continued

	Standards
Exterior Envelope Walls and Roofs	Exterior envelope walls and roofs containing thermal insulations shall meet applicable local government building code requirements for the complete wall or roof assembly.
Pipes, Ducts, and Equipment	Insulation materials intended for use on pipes, ducts and equipment shall be capable of meeting a flame spread classification not to exceed 150 (per ASTM E84-89a).

[1] ASTM indicates American Society for Testing and Materials

STORM WINDOWS

	Standards
Storm windows	
Aluminum insulating storm windows	7ANSI/AAMA[1] 1002.10-83.
Aluminum frame storm windows	ANSI/AAMA1002.10-83.
Wood frame storm windows	ANSI/NWWDA[2] I.S. 2-87. (Section 3)
Rigid vinyl frame storm windows	ASTM[3] D4099-89.
Frameless plastic glazing storm	Required minimum thickness windows is 6 mil (.006 inches).
Movable insulation systems for windows	Commercially available.

[1] ANSI/AAMA indicates American National Standards Institute/American Architectural Manufacturers Association.
[2] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association.
[3] ASTM indicates American Society for Testing and Materials.

STORM DOORS

	Standards
Storm doors	
Aluminum:	
Storm Doors	ANSI/AAMA[1] 1102.7-89.
Sliding glass storm doors	ANSI/AAMA1002.10-83.
Wood storm doors	ANSI/NWWDA[2] I.S. 6-86.
Rigid vinyl storm doors	ASTM[3] D3678-88.
Vestibules	
Materials to construct vestibules	Commercially available.

[1] ANSI/AAMA indicates American National Standards Institute/American Architectural Manufacturers Association.
[2] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association.
[3] ASTM indicates American Society for Testing and Materials.

REPLACEMENT WINDOWS

	Standards
Replacement windows	
Aluminum frame windows	ANSI/AAMA 101-88.
Steel frame windows . .	Steel Window Institute recommended specifications for steel windows, 1990.
Wood frame windows . .	ANSI/NWWDA I.S. 87.
Rigid vinyl frame windows	ASTM D4099-89.

REPLACEMENT DOORS

	Standards
Replacement doors Hinged doors: Steel doors	ANSI/SDI[1] 100-1985.
Wood doors: Flush doors	ANSI/NWWDA[2] I.S. 1-87. (exterior door provisions)
Pine, Fir, Hemlock and Spruce doors	ANSI/NWWDA I.S. 6-86.
Sliding patio doors Aluminum doors	ANSI/AAMA[3] 101-88.
Wood doors	NWWDA I.S. 3-83.

[1] ANSI/SDI indicates American National Standards Institute/Steel Door Institute.
[2] ANSI/NWWDA indicates American National Standards Institute/National Wood Window & Door Association.
[3] ANSI/AAMA indicates American National Standards Institute/American Architectural Manufacturers Association.

CAULKS AND SEALANTS

	Standards
Caulks and Sealants Putty	FS[1] TT-P-00791B, October 16, 1969 and Amendment 2, March 23, 1971.
Glazing compounds for metal sash	ASTM[2] C669-75 (1989).
Oil and resin base caulks	ASTM C570-72 (1989).
Acrylic (solvent types) sealants	FS TT-S-00230C, February 2, 1970 and Amendment 2, October 9, 1970.
Butyl rubber sealants	FS TT-S-001657, October 8, 1970.
Chlorosulfonated polyethylene sealants	FS TT-S-00230C, February 2, 1970 and Amendment 2, October 9,1970.
Latex sealing compounds	ASTM C834-76 (1986).

CAULKS AND SEALANTS—Continued

	Standards
Elastomeric joint sealants (normally considered to include polysulfide, polyurethane, and silicone)	ASTM C920-87.
Preformed gaskets and sealing materials	ASTM C509-84.

[1] FS indicates Federal Specifications.
[2] ASTM indicates American Society for Testing and Materials.

WEATHERSTRIPPING

	Standards
Weatherstripping	Commercially available

VAPOR RETARDERS

	Standards
Vapor retarders	Selected according to the provisions cited in ASTM[1] C755-85 (1990). Permeance not greater than 1 perm when determined according to the desiccant method described in ASTM E96-90.
Items to improve attic ventilation	Commercially available.

[1] ASTM indicates American Society for Testing and Materials.

CLOCK THERMOSTATS

	Standards
Clock thermostats	NEMA[1] DC 3-1989.

[1] NEMA indicates National Electric Manufacturers Association.

HEAT EXCHANGERS

	Standards
Heat exchangers, water-to-water and steam-to-water	ASME[1] Boiler and Pressure Vessel Code, 1992, Sections II, V, VIII, IX, and X, as applicable to pressure vessels. Standards of Tubular Exchanger Manufacturers Association, Seventh Edition, 1988.
Heat exchangers with gas-fired appliances +	Conformance to AGA[2] Requirements for Heat Reclaimer Devices for Use with Gas-Fired Appliances No. 1-80, June 1, 1980. AGA Laboratories Certification Seal.

+ The heat reclaimer is for installation in a section of the vent connector from appliances equipped with draft hoods or appliances equipped with powered burners or induced draft and not equipped with a draft hood.
[1] ASME indicates American Society of Mechanical Engineers.
[2] AGA indicates American Gas Association.

HEAT PUMP WATER HEATERS

	Standards
Heat pump water heating heat recovery systems	Electrical components to be listed by UL[1].

[1] UL indicates Underwriters Laboratories.

BOILER/FURNACE CONTROL SYSTEMS

	Standards
Automatic set back thermostats	Listed by UL[1]. Conformance to NEMA[2] DC 3-1989.
Line voltage or low-voltage room thermostats	NEMA DC 3-1989.
Automatic gas ignition systems	ANSI[3] Z21.21-1987 and Z21.21a-1989. AGA[4] Laboratories Certification Seal.
Energy management systems	Listed by UL.

BOILER/FURNACE CONTROL SYSTEMS—Continued

	Standards
Hydronic boiler controls	Listed by UL.
Other burner controls	Listed by UL.

[1] UL indicates Underwriters Laboratories.
[2] NEMA indicates National Electric Manufacturers Association. .
[3] ANSI indicates American National Standards Institute.
[4] AGA indicates American Gas Association.

WATER HEATER MODIFICATIONS

	Standards
Insulate tank and distribution piping	(See insulation section of this appendix).
Install heat traps on inlet and outlet piping	Applicable local plumbing code.
Install/replace water heater heating elements	Listed by UL[1].
Electric, freeze-prevention tape for pipes	Listed by UL.
Reduce thermostat settings	State or local recommendations.
Install stack damper, gas-fueled	ANSI[2] Z21.66-1988, including Exhibits A&B, and ANSI Z223.1-1988.
Install stack damper, oil-fueled	UL 17, November 28, 1988, and NFPA[3] 31-1987.
Install water flow modifiers	Commercially available.

[1] UL indicates Underwriters Laboratories.
[2] ANSI indicates American National Standards Institute.
[3] NFPA indicates National Fire Prevention Association.

WASTE HEAT RECOVERY DEVICES

	Standards
Desuperheater/water heaters	ARI[1] 470-1987.
Condensing heat exchangers	Commercially available components and in new heating furnace systems to manufacturers' specifications.
Condensing heat exchangers	Commercially available (Commercial, multi-story building, with teflon-lined tubes institutional) to manufacturers' specifications.
Energy recovery equipment	Energy Recovery Equipment and Systems Air-to-Air (1978) Sheet Metal and Air-Conditioning Contractors National Association (SMACNA[2]).

[1] ARI indicates Air Conditioning and Refrigeration Institute.
[2] SMACNA denotes Sheet Metal and Air Conditioning Contractors' National Association.

BOILER REPAIR AND MODIFICATION/EFFICIENCY IMPROVEMENTS

	Standards
Install gas conversion burners	ANSI[1] Z21.8-1984, (for gas or oil-fired systems) ANSI Z21.17-1984, ANSI Z21.17a-1990, and ANSI Z223.1-1988. AGA[2] Laboratories Certification seal.
Replace oil burner	UL[3] 296, February 28, 1989 Revision and NFPA[4] 31-1987.
Install burners (oil/gas)	ANSI Z223.1-1988 for gas equipment and NFPA 31-1987 for oil equipment.
Re-adjust boiler water temperature, or install automatic boiler temperature reset control.	ASME[5] CSD-1-1988, ASME CSD-1a-1989, ANSI Z223.1-1988, and NFPA 31-1987.

BOILER REPAIR AND MODIFICATION/EFFICIENCY IMPROVEMENTS—Continued

	Standards
Replace/modify boilers	ASME Boiler and Pressure Vessel Code, 1992, Sections II, IV, V, VI, VIII, IX, and X. Boilers must be Institute of Boilers and Radiation Manufacturers (IBR) equipment.
Clean heat exchanger, adjust burner air shutter(s), check smoke no. on oil-fueled equipment. Check operation of pump(s) and replacement filters.	Per manufacturers' instructions.
Repair combustion chambers	Refractory linings may be required for conversions.
Replace heat exchangers, tubes	Protection from flame contact with conversion burners by refractory shield.
Install/replace thermostatic radiator valves	Commercially available. One pipe steam systems require air vents on each radiator; see manufacturers' requirements.
Install boiler duty cycle control system	Commercially available. NFPA 70, National Electrical Code (NEC) 1993 and local electrical codes provisions for wiring.

[1] ANSI indicates American National Standards Institute.
[2] AGA indicates American Gas Association.
[3] UL indicates Underwriters Laboratories.
[4] NFPA indicates National Fire Prevention Association.
[5] ANSI/ASME indicates American National Standards Institute/American Society of Mechanical Engineers.

HEATING AND COOLING SYSTEM REPAIRS AND TUNE-UPS/EFFICIENCY IMPROVEMENTS

	Standards
Install duct insulation	FS[1] HH-I-558C, January 7, 1992 (see insulation sections of this appendix).
Reduce input of burner; derate gas-fueled equipment	Local utility company and procedures if applicable for gas-fueled furnaces and ANSI[2] Z223.1-1988 (NFPA[3] 54-1988) including Appendix H.
Repair/replace oil-fired equipment	NFPA 31-1987.
Replace combustion chamber in oil-fired furnaces or boilers.	NFPA 31-1987.
Clean heat exchanger and adjust burner: adjust air shutter and check CO_2 and stack temperature. Clean or replace air filter on forced air furnace.	ANSI Z223.1-1988 (NFPA 54-1988) including Appendix H.
Install vent dampers for gas-fueled heating systems	Applicable sections of ANSI Z223.1-1988 (NFPA 54-1988) including Appendices H,I,J, and K. ANSI Z21.66-1988 and Exhibits A & B for electrically operated dampers.
Install vent dampers for oil-fueled heating systems	Applicable sections of NFPA 31-1987 for installation and in conformance with UL[4] 17, November 28, 1988.
Reduce excess combustion air:	
A: Reduce vent connector size of gas-fueled appliances	AN7SI Z223.1-1988 (NFPA 54-1988) Part 9 and Appendices G & H.
B: Adjust barometric draft regulator for oil fuels	NFPA 31-1987 and per manufacturers' (furnace or boiler) instructions.

HEATING AND COOLING SYSTEM REPAIRS AND TUNE-UPS/EFFICIENCY IMPROVEMENTS—Continued

	Standards
Replace constant burning pilot with electric ignition device on gas-fueled furnaces or boilers	ANSI Z21.71-1981, Z21.71a-1985, and Z21.71b-1989.
Readjust fan switch on forced air gas or oil-fueled furnaces	Applicable sections and Appendix H of ANSI Z223.1-1988 (NFPA 54-1988) for gas furnaces and NFPA 31-1987 for oil furnaces.
Replace burners	See power burners (oil/gas).
Install/replace duct furnaces (gas)	ANSI Z223.1-1988 (NFPA 54-1988).
Install/replace heat pumps	Listed by UL.
Replace air diffusers, intakes, registers, and grilles	Commercially available.
Install/replace warm air heating metal ducts	Commercially available.
Filter Alarm Units	Commercially available.

[1] FS indicates Federal Specifications.
[2] ANSI indicates American National Standards Institute.
[3] NFPA indicates National Fire Prevention Association.
[4] UL indicates Underwriters Laboratories.

REPLACEMENT FURNACES, BOILERS, AND WOOD STOVES

	Standards
Chimneys, fireplaces, vents and solid fuel burning appliances	NFPA[1] 211-1988.
Gas-fired furnaces	ANSI[2] Z21.47-1987, Z21.47a-1988, and Z21.47b-1989. ANSI Z223.1-1988 (NFPA 54-1988).
Oil-fired furnaces	UL[3] 727, August 27, 1991 Revision and NFPA 31-1987.

REPLACEMENT FURNACES, BOILERS, AND WOOD STOVES—Continued

	Standards
Liquified petroleum gas storage	NFPA 58-1989.

[1] NFPA indicates National Fire Prevention Association.
[2] ANSI indicates American National Standards Institute.
[3] UL indicates Underwriters Laboratories.

VENTILATION FANS

	Standards
Ventilation Fans Including Electric Attic, Ceiling, and Whole House Fans.	UL 507, August 23, 1990 Revision.

AIR CONDITIONERS AND COOLING EQUIPMENT

	Standards
Air Conditioners Central Air Conditioners	ARI[1] 210/240-1989.
Room size units	ANSI/AHAM[2] RAC-1-1982.
Other Cooling Equipment (including Evaporative Coolers, Heat Pumps and other equipment)	UL[3] 1995, November 30, 1990. #

[1] ARI indicates Air Conditioning and Refrigeration Institute.
[2] AHAM/ANSI indicates American Home Appliance Manufacturers/American National Standards Institute.
[3] UL indicates Underwriters Laboratories.

This standard is a general standard covering many different types of heating and cooling equipment.

SCREENS, WINDOW [illegible] MATERIALS

	Standards
Insect Screens	Commercially available.
Window films	Commercially available.
Shade screens	
Fiberglass shade screens	Commercially available.
Polyester shade screens	Commercially available.
Rigid awnings	
Wood rigid awnings	Commercially available.
Metal rigid awnings	Commercially available.
Louver systems	
Wood louver systems	Commercially available.
Metal louver systems	Commercially available.
Industrial-grade white paint used as a heat-reflective measure on awnings, window louvers, doors, and exterior duct work (exposed)	Commercially available.

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #404

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Topic: Furnace Filter Alarms

Reference: (1) 10CFR440
(2) Weatherization Bulletin #403
(3) DOE, DHS, and HIP Contracts

Summary: Amends the list of permissible weatherization tactics to include Furnace Filter Alarms, with certain restrictions and considerations.

Effective immediately, furnace filter alarms are an acceptable tactic under all weatherization contracts. Advance written permission is not required before weatherization agencies install, or specify for contractor installation, furnace filter alarms.

Furnace filter alarms are devices which attach to the filter in a central air circulation system and which produce an audible signal indicating that the filter needs cleaning (permanent filters) or replacing (disposable filters). Failure to clean or replace furnace filters at the recommended interval results in wasted energy through increased electrical use by the blower motor and increased heat loss from ducts.

Furnace filter alarms should be considered as a weatherization tactic only when all of the following conditions are met:

1. The existing filter in the home is found to be dirty and in need of replacement (disposable filters) or cleaning (permanent filters);

2. The agency is willing to commit to the time required to instruct the dwelling occupant in the use of the filter alarm unit in addition to the need for proper filter maintenance procedures;

3. The occupant of the dwelling agrees to use the filter alarm unit as instructed, and appears to understand the instructions provided;

4. That the filter alarm unit can be properly installed on the filter (i.e.: sufficient clearance exists);

5. (For disposable filters only) the occupant agrees to buy, or the agency supplies, a one-year supply of filters to replace dirty filters as indicated by the filter alarm unit.

For those agencies which utilize contracted labor, the field technician or heating specialist will be responsible for providing the required client education concerning filter maintenance and the operation of the Furnace Filter Alarm.

CSS/bam/2601R

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DEPARTMENT OF COMMUNITY AFFAIRS

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WEATHERIZATION BULLETIN #405

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Topic: Expansion of the definition of allowable weatherization materials to include materials necessary to conform to the building code.

Reference:
(1) DOE, DHS, HIP Contracts
(2) 10CFR440
(3) Weatherization Bulletin #403

Summary: Weatherization activities may not introduce new building code violations into the dwelling units served. Any material required to be installed by the building code, as a condition for, or as a result of, providing weatherization services, is an allowable weatherization material expenditure.

Existing policy of the OLIEC, as stated in all weatherization contracts, is that all subgrantee operations must be conducted so as to, "comply with all Federal, State, and Municipal Laws, rules, and regulations generally applicable to the activities in which the Grantee is engaged in the performance of this grant."

This stipulation includes conformance with the requirements of the State Uniform Construction Code Act (N.J.S. 52:27D-119 et. seq. [P.L. 1975, c. 217]) (hereinafter referred to as, "building code").

Weatherization contracts also state that allowable weatherization materials are those materials listed in 10CFR440 Appendix A. As stated in Weatherization Bulletin #403, the Appendix A material standards were revised and updated in April 1993. These standards do not include some materials which may be necessary to comply with the building code.

This Bulletin reconciles this contradiction. Any material required to be installed by the building code, as a condition for, or as a result of, providing weatherization services, is also an allowable weatherization material expenditure.

This Bulletin does not authorize or require that weatherized dwelling units be brought into full conformance with the building code. It does require that weatherization activities not introduce new building code violations into the dwelling units served. This Bulletin authorizes material expenditures for materials (not listed in the current Weatherization Material Standards) necessary to meet this requirement.

Agencies should consult with their local code officials for guidance concerning building code requirements.

If the building code requires the installation of smoke or carbon monoxide detectors as a provision for providing weatherization services, the technical specifications, number, and placement of the detectors will be determined by the requirements of the building code. If battery-powered detectors are installed, it is recommended that the occupants be informed of the procedures for testing the unit and of the importance of replacing the battery when required.

CSS/bam/2605R

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WEATHERIZATION BULLETIN #406

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice Sabree-Sylla, Supervisor, OLIEC

Topic: Air Conditioners

Reference:
(1) 10CFR440
(2) DOE, DHS and HIP Contracts
(3) Weatherization Bulletin #403

Summary: See text of Bulletin below.

Effective with the issue date of this Bulletin, it is a permissible weatherization tactic to modify, repair, tune-up, and, in limited and specific circumstances, replace air conditioning systems.

Replacement of air conditioning systems is permitted whenever replacement is required to facilitate the authorized replacement of (or other modification to) a heating system. This replacement of air conditioning systems should also, where possible, be supported by documentation which indicates that the air conditioning is medically necessary.

All work of any kind involving alterations or replacement of air conditioning systems must receive prior authorization from OLIEC.

CSS/bam/2606R

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WEATHERIZATION BULLETIN #407

April 12, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Affected Programs: All

Topic: Reflective insulation products for water heater insulation

Reference: (1) Weatherization Bulletin #403

Summary: Adds reflective insulation products for water heaters to the roster of allowable weatherization materials listed in Weatherization Bulletin #403.

Weatherization Bulletin #403, contains the material standards applicable to weatherization measures which are installed by the Weatherization Assistance Program. Only materials which are listed in Bulletin #403, or specified by other subsequent Bulletins, are permitted to be installed with WAP funds.

This Bulletin adds reflective insulation products for water heaters to the roster of allowable materials, under specific circumstances. Use of reflective for water heaters is limited to those installations where insufficient room exists for a standard water heater insulation jacket.

This Bulletin does not constitute approval to use reflective insulation in any other application, such as radiant barriers or in conjunction with any other insulation application.

Reflective insulation products for water heaters must comply with any applicable material standard listed in the insulation section of the material standards transmitted by Weatherization Bulletin #403, including a flame spread classification not to exceed 150 per ASTM E84-87.

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WEATHERIZATION BULLETIN #408

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Affected Programs: All

Topic: List of unapproved materials

Reference: (1) 10CFR440 - Appendix A
(2) Weatherization Bulletin #403

Summary: Weatherization Assistance Program funds may only be spent for materials which are listed in Appendix A of 10CFR440, or updates (such as Weatherization Bulletin #403, to the approved materials list. Other materials may be installed only with prior written permission. The materials listed in this Bulletin may not be installed under any circumstances.

Weatherization Assistance Program funds may only be spent for materials which appear in Appendix A, its updates, or for materials which have received specific prior written authorization for installation.

The following materials have been evaluated by DOE and are NOT authorized for use in WAP under any circumstances:

1) Thermizer - a fixed vent control system.

2) Dovetec - a stove that burns corn.

3) Conquest - a thermostat/duty-cycler for furnace and air-conditioning.

(continued)

4) Air Krete - A cementitious foam insulation.

5) Ceramic paints - used on roofs and walls to reduce air-conditioning costs.

6) GACO - polyurethane foam insulation applied to top of roof surface.

7) Heartland - a floating shuttle damper for the vent of a clothes dryer.

8) OOPS - a low heating oil level alarm

9) Clear latex caulk (note: only caulks which meet the standard ASTM C834-76 are allowed.)

10) Air barrier films use below floors that are above exposed crawl spaces.

CSS/bam/2608R

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WEATHERIZATION BULLETIN #409

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Affected Programs: All

Topic: Procedure to seek approval for currently unauthorized materials.

Summary: Only materials for which standards are listed in Appendix A of 10CFR440, or successor documents, are permitted to be installed with Weatherization Assistance Program funds. Department of Energy Headquarters has established a procedure to seek approval for materials which are not currently authorized. This procedure is described in the text of this Bulletin.

Section 412(9)(G) of the Energy Conservation and Production Act authorizes the Secretary of Energy to approve "other insulating or energy conserving devices or technologies" in addition to those already approved for use in the program through inclusion of the applicable material standard in Appendix A of 10CFR440, or successor documents.

The Department of Energy Headquarters has established the following procedure for considering the use of currently unauthorized materials in WAP.

States may request DOE to evaluate a material for use in WAP through submittal of a letter to Headquarters. The letter must include test results and any other supporting documentation which would allow DOE to determine:

1) whether the product can be used for residential retrofit;

2) potential savings versus costs of materials and installation;

3) actual applications and restrictions, including health and safety concerns;

4) alternate materials and how they could be used in place of the one under consideration;

5) compliance with applicable industry or other standards.

The documentation should include the name, address and telephone number of the manufacturer's representative. Other applicable documentation should be submitted when available, e.g., sample product, material specifications, warranty provisions, maintenance procedures, analysis of energy savings, etc.

The Department of Energy will only consider requests to evaluate new materials which are submitted by States, therefore, any subgrantee who wishes to have a material evaluated for inclusion in WAP should submit the above listed information to the Office of Low-Income Energy Conservation. OLIEC will then forward the information to DOE Headquarters for evaluation.

CSS/bam/2609R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #410

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Supersedes: Not Applicable

Affected Programs: All

Topic: Ordinary Repairs/Uniform Construction Code

Reference: (1) NJAC 5:23-2.7

Revision Scope: Not Applicable

Summary: The New Jersey Uniform Construction Code generally categorizes window and door replacement as "Ordinary Repairs". Ordinary repairs may be made without construction permits or inspections. To qualify as an ordinary repair, the replacement units must fit into the same rough opening and be the same type (ie.: replacing a double hung window with another double hung window) as the original units. Replacement windows and doors must not increase the code non-conformity of the building.

All weatherization and heating system improvement work performed with funding supplied by the Office of Low-Income Energy Conservation must comply with the provisions of the New Jersey Uniforms Construction Code (N.J.A.C. 5:23-1 et seq.)

N.J.A.C. 5:23-2.7 states that ordinary repairs may be made, "without application or notice to the construction official." This section of the Uniform Construction Code proceeds to describe the types of work which qualify as ordinary repairs.

Many of the dwellings served by the Weatherization Assistance Program exhibit numerous non-conforming building features. For example, an existing bedroom window may not meet the size requirements for emergency egress. If this window is to be replaced, all that is required (under most circumstances) is that the new window not increase the level of building code non-conformance.

The Bureau of Technical Services, Division of Codes and Standards, Department of Community Affairs([609] 984-7607) states that:

> "According to our interpretation of the regulations, upgrading of replacement windows and doors to comply with the present code should not be necessary provided the following conditions are met.
>
> 1. The replacement windows and doors are of similar kind* and fit into the same rough openings.
>
> 2. The replacement windows and doors do not reduce the existing glazing area and quality, fire-rating, ventilation and emergency escape openings, so as not to increase non-conformity of any existing building.

"Please be advised that the replacement of any window or door, with another one of the same type, and which goes into the same rough opening, is considered an ordinary repair and should not require a construction permit."

> * "similar kind" refers to the method of window operation. For example, a double hung window replacing a double hung window is replacement with a similar kind window. Replacement of a double hung window with a casement window is not "similar kind" replacement.

CSS/bam/2610R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
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JANE M. KENNY
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WEATHERIZATION BULLETIN #411

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Supersedes: None

Affected Programs: All

Topic: Approval of Fluorescent Lighting

Reference: Weatherization Program Notice 94-5, Effective Date: July 29, 1994
10CFR440 Appendix A

Summary: The DOE has determined that replacement of indoor screw-in incandescent light bulbs, by fluorescent bulbs or tube fixtures is now an allowable weatherization measure.

The Department of Energy (DOE) has determined that fluorescent bulbs and tube fixtures are now an allowable weatherization measure. Replacement of exterior lighting is not allowed. Lighting upgrades must be recommended by the EA-QUIP Audit that ranks this procedure and considers it's cost effectiveness with other weatherization measures to be installed on the dwelling unit.

CSS/bam/2611R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
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JANE M. KENNY
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WEATHERIZATION BULLETIN #412

April 16, 1999

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Affected Programs: All

Topic: Incidental repairs

Reference: 10CFR440.18(c)(9)

Summary: Defines and establishes allowable expenditures limits for incidental repairs

The cost of incidental repairs are allowable if such repairs are deemed necessary to make the installation of weatherization materials effective, and/or to protect weatherization materials from damage that will substantially reduce the life span on the installations. Incidental repairs may include but are not limited to the following:

Weatherization Tactic	Incidental Repair Option	Reason
Attic Insulation	Patch hole in roof	Moisture and/or air infiltration
Wall Insulation	Patch hole in wall	Moisture and/or air infiltration
Heater Installation	Install sump pump/repair chimney	Moisture and/or back drafting
Window Installation	Install rain gutter/repair frame	Moisture and/or air infiltration

The allowable per unit expenditure for incidental repairs shall not exceed 10% of the total actual unit costs.

CSS/bam/2612R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #413

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Date: April 16, 1999

Topic: Walk away policy

Summary: The purpose of this policy bulletin is to establish clear guidelines for subgrantees to follow when evaluating housing that is substandard, or has health and safety issues that require a capital intensive investment, beyond the scope of the weatherization program. While this policy does not cover every scenario that may be encountered, it includes the most common issues that agencies must address when making a decision to walk-away from a unit.

STRUCTURAL DEFICIENCIES

Includes but is not limited to the following:

Foundation is compromised or roof deficiencies exceed minor repairs.

HEALTH HAZARDS

Includes but is not limited to the following:

Sewage problems, lack of plumbing, insect or rodent infestation, lead paint flaking, asbestos flaking, and severe moisture problems.

SAFETY/CODE VIOLATIONS

Faulty electrical wiring or other issues documented by a local code inspector or public utility technician.

(continued)

APPEALS PROCESS

If a unit cannot be weatherized, the household must be notified in writing and given the option to reapply if the problem is corrected. The household may appeal the decision in which case the OLIEC would review the situation and advise the agency and the household of the findings. If the deficiencies are corrected and the household reapplies, the agency will provide services as soon as possible i.e. the client does not go to the back of the waiting list.

CSS/bam/2613R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

WEATHERIZATION BULLETIN #414

To: Executive Directors and Weatherization Managers

From: Clarice S. Sabree-Sylla, Supervisor, OLIEC

Topic: Energy Audit Issues

Date: April 12, 1999

Re: 10CFR440

Summary: The purpose of this bulletin is to clarify issues related to the maximum per unit expenditure figure that is being used to process energy audits. It is also a reminder to subgrantees that to be eligible for the 30/70 ratio, it is mandatory to expend grant funds only on those items that have the highest savings to investment ratio (SIR).

This office has been advised that some subgrantees are inflating the maximum expenditure figure used in the audit to increase the number of recommended measures. In some cases it is being done to ensure the audit recommends window replacement. Several agencies have installed storm windows and primary windows although they were not recommended by EA-QUIP. The approval received from the Department of Energy (DOE) to use the instrumented energy audit includes a stipulation that all measures installed with grant funds must be justified by a savings to investment ratio (SIR) of one or greater. With the exception of air sealing work, measures that are not recommended by the audit cannot be paid for with grant funds. Further, agencies cannot skip the highest rated measures in favor of installing lower ranked measures.

Effective immediately subgrantees must follow the policy outlined below.

Single Family Units

When completing energy audits for single family owner occupied units, agencies are required to input an amount not exceeding the allowable maximum expenditure as per the weatherization contract. If the single family unit is a rental, the figure should include the estimated landlord contribution. Agencies may use a higher figure when negotiating with the landlord, if they intend to present the owner with a list of possible measures based on a larger contribution. The actual figure used to complete the audit should be based on the actual amount of funds available, after the negotiation process.

Multi-Family Units

Agencies may use a preliminary figure based on the estimated amount of funds required to complete an effective weatherization job. Building owners should be advised that the list of measures represents those items that should be completed for the most effective weatherization job. They should also be told that only the items ranked the highest based on the SIR can be installed with grant funds.

Coodinating Weatherization with Demand Side Management (DSM)

Some agencies are working with utility demand side management programs and/or utility direct grant programs. If subgrantees receive direct grants and intend to install measures not recommended in the energy audit with those funds, when completing the audit those items should be evaluated as completed. For example, if windows are going to be installed, then the existing windows should not be rated poor. If insulation is to be installed then the area should be considered insulated when completing the audit. The comments section should include a list of measures that are going to be installed with other funds. These measures that must be installed before the units are reported to the Department. When working with a utility funded DSM program, subgrantees should provide the company with a list of clients that will be weatherized during each grant period to increase the possibility of having the work completed before the energy audit is conducted.

Dense Pack Wall Insulation

Insulation is one of the highest rated energy measures in the Weatherization program, and is often recommended by EA-QUIP. Unless there is a non-feasibility criterion that prevents compliance, subgrantees are expected to install insulation, including wall insulation when recommended.

If the cost of wall insulation exceeds the amount of funds available, the agency should consider installing insulation in strategic areas of the home. Examples: the floor of the living area located over an unheated garage or a porch overhang.

CSS/bam/2614R

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

CHRISTINE TODD WHITMAN
Governor

JANE M. KENNY
Commissioner

Weatherization Bulletin #415

To: EXECUTIVE DIRECTORS AND WEATHERIZATION MANAGERS

From: Clarice S. Sabree-Sylla, Supervisor
Office of Low-Income Energy Conservation

Date: April 12, 1999

Topic: Wet-Spray Cellulose Insulation

Reference: 10CFRPart 440

Summary: This bulletin advises subgrantees of the Department of Energys' approval of Wet Spray Cellulose Insulation as an allowable weatherization material.

DOE has added the use of wet-spray cellulose insulation standard for conformance ASTM-C1149-90 entitled "Self-Supporting SPRAY Cellulosic Thermal/Acoustical Insulation" to the list of approved materials for use in the Weatherization Assistance Program. The above ASTM standard must be met for this material to be purchased with DOE funds. Agencies which elect to use this material in their programs are advised to closely follow the manufacturer's instructions on the mixture and application of this product.

For your information, a summary of the ASTM standard is attached with options on ordering the complete printed standard. Additional information is also available on the ASTM website. To access that site, go to http://www.astm.org/dsearch.htm, choose "Search for Individual Standards", then enter "Spray Cellulose" and click on "C1149-90".

CSS/bam/1511R

Attachment

tandard Specification for

C1149-90 Self-Supported SPRAY Applied Cellulosic Thermal/Acoustical Insulation

1. Scope

1.1 The specification covers the physical properties of self-supported SPRAY applied cellulosic fibers intended for use as thermal or acoustical insulation, or both.

1.2 This specification covers chemically treated cellulosic materials intended for pneumatic applications where temperatures do not exceed 82.2°C (180°F) and where temperatures will routinely remain below 65.6°C (150°F).

1.2.1 Type I -Material applied with liquid adhesive and suitable for either exposed or enclosed applications.

1.2.2 Type II -Materials containing a dry adhesive that is activated by water during installation and intended only for enclosed or covered applications.

1.3 This is a material specification only and is not intended to deal with methods of application that are supplied by the manufacturer.

1.4 The values stated in SI units are to be regarded as standard. The inch-pound units given in parentheses are for information only.

1.5 When the installation or use of insulation materials, accessories, and systems may pose safety or health problems, the manufacturer shall provide the user appropriate current information regarding any known problems associated with the recommended use of the company's products, and shall also recommend protective measures to be employed in their safe utilization. The user shall establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.

1.6 This standard does not purport to address the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices prior to use.

Ordering Information

Price: $ 18.00 Printed Pages: 7

The information above is only a summary of the ASTM standard. Order the complete standard in three ways:

Delivery

Delivery 5-10 minutes. Cost: Price as noted above, plus fax charge. **CREDIT CARDS ONLY.**
Notes about Fax Quality

PDF Delivery

Immediate Download. Cost: Price as noted above, plus download charge. **CREDIT CARDS ONLY.**
Notes about PDF Quality
Note about Acrobat

Mail Delivery

Delivery 5-10 business days. Cost: Price as noted above. **CREDIT CARDS ONLY.** For Ship and Bill Option contact ASTM Customer Services (610) 832-9585, or by fax at (610) 832 - 9555.

Subject Index

Acoustical materials/tests; CELLULOSE and CELLULOSE derivatives; Combustion; Corrosivity; Fungal influence; Moisture absorption; Odor; Resistance-fungal; Smoldering combustion; Thermal insulating materials-fibrous (SPRAY -applied); Thermal insulation materials; self-supported SPRAY applied cellulosic thermal/acoustical insulation.; spec.

WEATHERIZATION BULLETIN # 416

Date: 12/20/1999

To: Executive Directors, Weatherization Program Managers

Cc: Program Monitors

From: Clarice Sabree-Sylla, Supervisor
Office of Low-Income Energy Conversation

Re: **Notification Requirements for Lead Hazard Education before Renovation**

5.12 NOTIFICATION REQUIREMENTS FOR LEAD HAZARD EDUCATION BEFORE RENOVATION. For **immediate** implementation – all Low-Income Weatherization Assistance Program activities doing renovation work in pre-1978 housing are subject to the provisions of a Federal regulation that requires them to give a notification to the occupants of the housing about the potential hazards of lead paint and lead paint dust. This notification applies to all entities that do renovation work and is required when more than two square feet of lead paint surfaces will be disturbed during Weatherization work. This requirement became effective June 1, 1999 and is published in the June 1,1998 Federal Register, Vol. 63, No. 104. This is an Environmental Protection Agency (EPA) Final Rule, 40 CFR Part 745 titled: Lead; Requirements for Hazard Education before Renovation of Target Housing. Renovators are required to give a copy of the EPA booklet "*Protect Your Family from Lead in Your Home*" at least seven days prior to the start of work. There are several specific exclusions like emergency repairs. Also, there is a record keeping requirement.

EPA has a lead homepage that is a part of the EPA website where there is a useful information about where there is useful information about this notification requirement, including a fact sheet, frequently asked question, the above cited Federal Register notice and the above referenced 14 page booklet, including information on how to get the booklet. States and local agencies will have to bear the costs of copying the booklet. States and local agencies needing the booklet for upcoming Weatherization work may download the booklet from the website and reproduce it locally. DOE will provide State offices with camera ready copies of the booklet. The address for the EPA website is http://www.epa.gov/lead/leadrenf.htm. The mailing for the guidance will include the EPA pamphlet, "*The lead-based Paint Pre-Renovation Education Rule... a handbook for contractors, property managers, and maintenance personnel*", which explains the requirements of the rule.

Please remember – under this regulation local agencies who do not give proper notification could incur hefty fines if found doing renovation work in pre-1978 housing stock where more than two square feet of paint surface are disturbed.